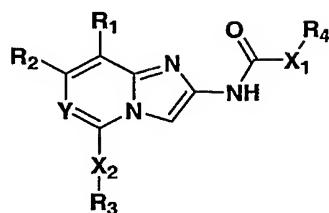


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Claims

What is claimed is:

5 1. A compound of the formula



or a pharmaceutically acceptable salt thereof, wherein:

10 X<sub>1</sub> is CH<sub>2</sub>, NH, or O;

X<sub>2</sub> is absent, or is

(CH<sub>2</sub>)<sub>x</sub>, NH, O, or , wherein “~” are points of attachment, or

15 is a tether 2, 3 or 4 atoms in length, selected from

CH<sub>2</sub>-CH<sub>2</sub>-N<sup>~</sup><sub>R</sub>,

O-CH<sub>2</sub>-CH<sub>2</sub>-N<sup>~</sup><sub>R</sub>,

N-CH<sub>2</sub>-CH<sub>2</sub>-N<sup>~</sup><sub>R</sub>

wherein R is H or (C<sub>1</sub>-C<sub>6</sub>)alkyl, and

wherein “~” are points of attachment and x' is an integer from 1

20 to 3;

Y is N, C-H, C-F, or C-OMe;

R<sub>1</sub> is H or halo;

25

R<sub>2</sub> is (C<sub>3</sub>-C<sub>6</sub>)cycloalkyl,

(CH<sub>2</sub>)<sub>x</sub>-aryl,

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$(CH_2)_x$ -heterocyclo, or  
 $(CH_2)_x$ -heteroaryl,  
wherein x is 0, 1, or 2;

5           R<sub>3</sub> is H,

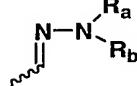
(C<sub>1</sub>-C<sub>6</sub>)alkyl,  
(C<sub>3</sub>-C<sub>6</sub>)cycloalkyl,  
aryl,  
heterocyclo,  
heteroaryl,  
C(O)NR<sub>a</sub>R<sub>b</sub>,

C(O)R<sub>a</sub>,  
CO<sub>2</sub>R<sub>a</sub>,  
C(O)C(O)NR<sub>a</sub>R<sub>b</sub>,

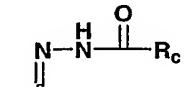
10          NO<sub>2</sub>,

SO<sub>2</sub>R<sub>a</sub>,  
SO<sub>2</sub>NR<sub>a</sub>R<sub>b</sub>,  
C(R<sub>c</sub>)=NOR<sub>a</sub>,

C(R<sub>c</sub>)=NR<sub>a</sub>,



20          , wherein “~” indicates the point of attachment,



             , wherein “~” indicates the point of attachment,

and wherein

R<sub>a</sub> is H,

25          (C<sub>1</sub>-C<sub>6</sub>)alkyl,  
(C<sub>3</sub>-C<sub>6</sub>)cycloalkyl,  
(CH<sub>2</sub>)<sub>y</sub>-aryl,  
(CH<sub>2</sub>)<sub>y</sub>-heterocyclo, or  
(CH<sub>2</sub>)<sub>y</sub>-heteroaryl,

30          wherein y is 0, 1, or 2;

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R<sub>b</sub> is H,

(C<sub>1</sub>-C<sub>6</sub>)alkyl,

(C<sub>3</sub>-C<sub>6</sub>)cycloalkyl,

5 aryl,

heterocyclo, or

heteroaryl;

R<sub>c</sub> is H,

10 (C<sub>1</sub>-C<sub>6</sub>)alkyl,

(C<sub>3</sub>-C<sub>6</sub>)cycloalkyl,

aryl,

heterocyclo, or

heteroaryl; and

15

R<sub>4</sub> is (C<sub>1</sub>-C<sub>6</sub>)alkyl, (C<sub>1</sub>-C<sub>6</sub>alkyl)-O-(C<sub>1</sub>-C<sub>6</sub>alkyl), cyclopropyl, CH<sub>2</sub>-cyclopropyl, or cyclobutyl.

2. A compound according to claim 1 in which Y is N.

20

3. A compound according to claim 1 in which Y is C-H.

4. A compound according to anyone of claims 1-3 in which X<sub>1</sub> is NH, X<sub>2</sub> is absent, or is (CH<sub>2</sub>)<sub>x</sub>, NH, or O;

25

R<sub>1</sub> is H;

R<sub>2</sub> is

(CH<sub>2</sub>)<sub>x</sub>-heteroaryl,

wherein x is 0, 1, or 2;

30 R<sub>3</sub> is

H,

aryl,

heterocyclo,  
heteroaryl,  
 $C(O)NR_aR_b$ ,  
 $C(O)R_a$ , or  
5            $CO_2R_a$ ,

and,

$R_4$  is ( $C_1-C_6$ )alkyl, cyclopropyl,  $CH_2$ -cyclopropyl or cyclobutyl.

5.       A compound according to anyone of claims 1-4 in which  $R_2$  is heteroaryl.

10

6.       A compound according to anyone of claims 1-5 in which  $R_2$  is heteroaryl and is selected from the group consisting of pyridine, and pyrimidine, either of which may be optionally substituted.

15

7.       A compound according to anyone of claims 1-6 in which  $X_2$  is absent and  $R_3$  is hydrogen, heteroaryl,  $C(O)NR_aR_b$ ,  $C(O)R_a$ , or  $CO_2R_a$ .

8.       A compound according to anyone of claims 1-7 in which  $R_4$  is ethyl or cyclobutyl.

20

9.       A compound selected from the group consisting of:

(7-pyridin-3-yl-imidazo[1,2-a]pyridin-2-yl)-carbamic acid ethyl ester;

1-ethyl-3-(7-pyridin-3-yl-imidazo[1,2-a]pyridin-2-yl)-urea;

[7-(2-dimethylamino-pyrimidin-5-yl)-imidazo[1,2-a]pyridin-2-yl]-carbamic acid ethyl ester;

1-[7-(2-dimethylamino-pyrimidin-5-yl)-imidazo[1,2-a]pyridin-2-yl]-3-ethyl-urea;

[7-(6-methoxy-pyridin-3-yl)-imidazo[1,2-a]pyridin-2-yl]-carbamic acid ethyl ester;

1-ethyl-3-[7-(6-methoxy-pyridin-3-yl)-imidazo[1,2-a]pyridin-2-yl]-urea;

30 1-ethyl-3-[7-(2-methoxy-pyrimidin-5-yl)-imidazo[1,2-a]pyridin-2-yl]-urea;

(7-pyridin-3-yl-imidazo[1,2-c]pyrimidin-2-yl)-carbamic acid ethyl esters;

- 1-ethyl-3-{7-[6-(2-morpholin-4-yl-ethoxy)-pyridin-3-yl]-imidazo[1,2-a]pyridin-2-yl}-urea;
- 1-ethyl-3-(5-hydroxymethyl-7-pyridin-3-yl-imidazo[1,2-a]pyridin-2-yl)-urea;
- 1-ethyl-3-(5-formyl-7-pyridin-3-yl-imidazo[1,2-a]pyridin-2-yl)-urea;
- 5 2-(3-ethyl-ureido)-7-pyridin-3-yl-imidazo[1,2-a]pyridine-5-carboxylic acid methyl ester;
- 1-ethyl-3-(7-pyrimidin-5-yl-imidazo[1,2-a]pyridin-2-yl)-urea;
- 1-[7-(3,5-dimethyl-isoxazol-4-yl)-imidazo[1,2-a]pyridin-2-yl]-3-ethyl-urea;
- 1-[7-(1-benzyl-1H-pyrazol-4-yl)-imidazo[1,2-a]pyridin-2-yl]-3-ethyl-urea;
- 10 1-ethyl-3-{7-[6-(4-methyl-piperazin-1-yl)-pyridin-3-yl]-imidazo[1,2-a]pyridin-2-yl}-urea;
- 1-ethyl-3-[7-(1-methyl-1H-pyrazol-4-yl)-imidazo[1,2-a]pyridin-2-yl]-urea;
- 1-[7-(2,4-dimethoxy-pyrimidin-5-yl)-imidazo[1,2-a]pyridin-2-yl]-3-ethyl-urea;
- 4-[2-(3-ethyl-ureido)-imidazo[1,2-a]pyridin-7-yl]-3,5-dimethyl-pyrazole-1-
- 15 carboxylic acid tert-butyl ester;
- 1-ethyl-3-[7-(1H-pyrazol-4-yl)-imidazo[1,2-a]pyridin-2-yl]-urea;
- 1-(3-chloro-7-pyridin-3-yl-imidazo[1,2-a]pyridin-2-yl)-3-ethyl-urea;
- 1-[3-chloro-7-(2-dimethylamino-pyrimidin-5-yl)-imidazo[1,2-a]pyridin-2-yl]-3-ethyl-urea;
- 20 2-(3-ethyl-ureido)-imidazo[1,2-a]pyridine-7-carboxylic acid methyl ester;
- 2-(3-ethyl-ureido)-imidazo[1,2-a]pyridine-7-carboxylic acid amide;
- 1-ethyl-3-[7-(5-methyl-2H-[1,2,4]triazol-3-yl)-imidazo[1,2-a]pyridin-2-yl]-urea;
- 1-[7-(1,5-dimethyl-1H-[1,2,4]triazol-3-yl)-imidazo[1,2-a]pyridin-2-yl]-3-ethyl-urea and 1-[7-(2,5-dimethyl-2H-[1,2,4]triazol-3-yl)-imidazo[1,2-a]pyridin-2-yl]-3-
- 25 ethyl-urea;
- 1-ethyl-3-[7-(5-methyl-[1,2,4]oxadiazol-3-yl)-imidazo[1,2-a]pyridin-2-yl]-urea;
- 1-ethyl-3-[5-(1-methyl-1H-pyrazol-4-yl)-7-pyridin-3-yl-imidazo[1,2-a]pyridin-2-yl]-urea;
- 2-(3-ethyl-ureido)-imidazo[1,2-a]pyridine-7-carboxylic acid;
- 30 1-[7-(3,5-dimethyl-1H-pyrazol-4-yl)-imidazo[1,2-a]pyridin-2-yl]-3-ethyl-urea;
- 1-ethyl-3-[7-(piperidine-1-carbonyl)-imidazo[1,2-a]pyridin-2-yl]-urea;
- 1-cyclopropyl-3-(7-pyrimidin-5-yl-imidazo[1,2-a]pyridin-2-yl)-urea;

- 1-cyclopropylmethyl-3-(7-pyrimidin-5-yl-imidazo[1,2-a]pyridin-2-yl)-urea;  
1-propyl-3-(7-pyrimidin-5-yl-imidazo[1,2-a]pyridin-2-yl)-urea;  
1-isopropyl-3-(7-pyrimidin-5-yl-imidazo[1,2-a]pyridin-2-yl)-urea;  
1-(7-pyrimidin-5-yl-imidazo[1,2-a]pyridin-2-yl)-3-(2,2,2-trifluoro-ethyl)-urea;
- 5 1-(2-methoxy-ethyl)-3-(7-pyrimidin-5-yl-imidazo[1,2-a]pyridin-2-yl)-urea;  
1-cyclobutyl-3-(7-pyrimidin-5-yl-imidazo[1,2-a]pyridin-2-yl)-urea;  
1-[7-(6-amino-pyridin-3-yl)-imidazo[1,2-a]pyridin-2-yl]-3-ethyl-urea;  
N-(7-acetylimidazo[1,2-a]pyridin-2-yl)-N'-ethylurea;  
1-ethyl-3-[7-(5-methyl-[1,3,4]oxadiazol-2-yl)-imidazo[1,2-a]pyridin-2-yl]-urea;
- 10 {4-[2-(3-ethyl-ureido)-imidazo[1,2-a]pyridin-7-yl]-pyridin-2-yl}-carbamic acid  
tert-butyl ester;  
1-ethyl-3-[7-(2H-pyrazol-3-yl)-imidazo[1,2-a]pyridin-2-yl]-urea;  
1-ethyl-3-(7-[1,2,3]thiadiazol-4-yl-imidazo[1,2-a]pyridin-2-yl)-urea;  
1-ethyl-3-[7-(5-isopropyl-[1,2,4]oxadiazol-3-yl)-imidazo[1,2-a]pyridin-2-yl]-urea;
- 15 1-ethyl-3-[7-(5-oxo-4,5-dihydro-[1,2,4]oxadiazol-3-yl)-imidazo[1,2-a]pyridin-2-  
yl]-urea;  
{4-[2-(3-ethyl-ureido)-imidazo[1,2-a]pyridin-7-yl]-pyridin-2-yl}-carbamic acid  
tert-butyl ester; compound with 1-[7-(2-amino-pyridin-4-yl)-imidazo[1,2-  
a]pyridin-2-yl]-3-ethyl-urea;
- 20 1-ethyl-3-[7-(morpholine-4-carbonyl)-imidazo[1,2-a]pyridin-2-yl]-urea;  
1-ethyl-3-[7-(2-methoxy-pyridin-4-yl)-imidazo[1,2-a]pyridin-2-yl]-urea;  
1-ethyl-3-[5-(3-methyl-[1,2,4]oxadiazol-5-yl)-7-pyridin-3-yl-imidazo[1,2-  
a]pyridin-2-yl]-urea;  
1-ethyl-3-[7-(6-fluoro-pyridin-3-yl)-imidazo[1,2-a]pyridin-2-yl]-urea;
- 25 1-ethyl-3-[7-(1-methyl-6-oxo-1,6-dihydro-pyridin-3-yl)-imidazo[1,2-a]pyridin-2-  
yl]-urea;  
1-ethyl-3-[7-(6-methyl-pyridin-3-yl)-imidazo[1,2-a]pyridin-2-yl]-urea;  
1-ethyl-3-[7-(1-methyl-2-oxo-1,2-dihydro-pyridin-4-yl)-imidazo[1,2-a]pyridin-2-  
yl]-urea;
- 30 7-(2-dimethylamino-pyrimidin-5-yl)-2-(3-ethyl-ureido)-imidazo[1,2-a]pyridine-5-  
carboxylic acid ethylamide, and

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1-[7-(2-dimethylamino-pyrimidin-5-yl)-5-pyrimidin-2-yl-imidazo[1,2-a]pyridin-2-yl]-3-ethyl-urea.

10. A compound selected from the group consisting of:

- 5    1-ethyl-3-(7-pyridin-3-yl-imidazo[1,2-a]pyridin-2-yl)-urea;  
    1-ethyl-3-[7-(6-methoxy-pyridin-3-yl)-imidazo[1,2-a]pyridin-2-yl]-urea;  
    1-ethyl-3-[7-(2-methoxy-pyrimidin-5-yl)-imidazo[1,2-a]pyridin-2-yl]-urea;  
    1-ethyl-3-(5-hydroxymethyl-7-pyridin-3-yl-imidazo[1,2-a]pyridin-2-yl)-urea;  
    1-ethyl-3-(5-formyl-7-pyridin-3-yl-imidazo[1,2-a]pyridin-2-yl)-urea;
- 10    10    2-(3-ethyl-ureido)-7-pyridin-3-yl-imidazo[1,2-a]pyridine-5-carboxylic acid  
         methyl ester;  
    1-ethyl-3-(7-pyrimidin-5-yl-imidazo[1,2-a]pyridin-2-yl)-urea;  
    1-ethyl-3-[5-(1-methyl-1H-pyrazol-4-yl)-7-pyridin-3-yl-imidazo[1,2-a]pyridin-2-  
         yl]-urea;
- 15    15    1-propyl-3-(7-pyrimidin-5-yl-imidazo[1,2-a]pyridin-2-yl)-urea;  
    1-cyclobutyl-3-(7-pyrimidin-5-yl-imidazo[1,2-a]pyridin-2-yl)-urea;  
    1-[7-(6-amino-pyridin-3-yl)-imidazo[1,2-a]pyridin-2-yl]-3-ethyl-urea;  
    1-ethyl-3-[7-(2H-pyrazol-3-yl)-imidazo[1,2-a]pyridin-2-yl]-urea;  
    1-ethyl-3-(7-[1,2,3]thiadiazol-4-yl-imidazo[1,2-a]pyridin-2-yl)-urea;
- 20    20    1-ethyl-3-[7-(2-methoxy-pyridin-4-yl)-imidazo[1,2-a]pyridin-2-yl]-urea;  
    1-ethyl-3-[5-(3-methyl-[1,2,4]oxadiazol-5-yl)-7-pyridin-3-yl-imidazo[1,2-  
         a]pyridin-2-yl]-urea;  
    1-ethyl-3-[7-(6-fluoro-pyridin-3-yl)-imidazo[1,2-a]pyridin-2-yl]-urea;  
    7-(2-dimethylamino-pyrimidin-5-yl)-2-(3-ethyl-ureido)-imidazo[1,2-a]pyridine-5-  
25    25    carboxylic acid ethylamide, and;  
    1-[7-(2-dimethylamino-pyrimidin-5-yl)-5-pyrimidin-2-yl-imidazo[1,2-a]pyridin-  
         2-yl]-3-ethyl-urea.
11. A pharmaceutical formulation comprising a compound according to  
30    anyone of claims 1-10 admixed with a pharmaceutically acceptable diluent,  
         carrier, or excipient.

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12. Use of a compound according to anyone of claims 1-10 as a medicine.
13. Use of a compound according to anyone of claims 1-10 in the manufacture of a medicament for infectious disease.